

REMARKS/ARGUMENTS

Claims 1 and 4-6 have been rejected under 35 U.S.C. §112, second paragraph. The Examiner has stated that “it is not clear what structure is required by the recitation” of the words “ejecting,” “blowing” and “generating.” Notwithstanding the Examiner’s choice of words, 35 U.S.C. § 112, second paragraph, does not require any statement of specific apparatus that is “required” by a claim. In fact, no specific apparatus is “required” in the apparatus of claim 1. Many modifications, variations and equivalents of the apparatus disclosed in this application, foreseeable and unforeseeable, may be provided within the spirit and scope of claim 1.

In any event, these terms are supported by the specification, for example at page 5, lines 3-11, and in original claims 1 and 3. Apparatus that ejects, blows and generates, as claimed, is described in detail in connection with the nozzle 4 at page 11, line 7 - page 12, line 5. That is, in one embodiment of the invention, in a nozzle 4, DIW is ejected from a DIW outlet port; high pressure nitrogen gas is blown (or supplied) from an annular gas outlet port surrounding the DIW outlet port; whereby the high pressure nitrogen gas collides with the DIW and generates a jet flow of droplets of DIW.

In view of the above, the 35 U.S.C. §112 rejection is requested to be withdrawn.

Claims 1, 4-6, 8, 10, 11 and 15-22 are pending and have been rejected as anticipated by Okuda et al. ‘762. Claims 1, 5 and 6 have been rejected as anticipated by Sato et al. ‘947.

Claims 1 and 8 have each been amended to clarify that the dual fluid spray nozzle is provided separately from the oxidation liquid nozzle. Claim 1 has been amended to state that the cleaning controller is programmed to control the oxidation liquid supply mechanism and the physical cleaning mechanism. Claims 1 and 8 have been amended to state that there is simultaneous supplying of the jet flow of droplets of the deionized water and the oxidation liquid to the substrate surface, for a period of time, so as to perform physical cleaning of the substrate surface while simultaneously supplying said oxidation liquid to the substrate surface. See page 4, line 18 – page 5, line 2.

These amendments to claims 1 and 8 respond to the Examiner's comments in the Office Action. On page 4 of the Action, the Examiner commented that in Okuda et al., "the treatment liquid and the DI water are simultaneously supplied at the time of the switch between the treatment liquid and water. It is noted that the claims do not require any

specific length of the simultaneous supplying." This is addressed by clarifying that the simultaneous supplying lasts for "a period of time, so as to perform physical cleaning of the substrate surface while simultaneously supplying said oxidation liquid to the substrate surface". This process advantageously reduces the required treatment time.

The Examiner also commented on Sato et al. on page 4, last paragraph, stating "[T]he apparatus claims do not require the nozzles to be separate. The claims do not require separate supply lines or separate sources for DI water and the oxidation liquid. The method claims were not and are not rejected over Sato et al." As amended, claims 1 and 8 now positively recite that the dual fluid spray nozzle is provided separately from the oxidation liquid nozzle.

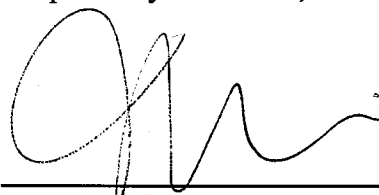
On page 5 of the Action, the Examiner has commented "the controller recited by the claims is not recited as programmed to perform any specific function. The claims recite only intended use of the controller (controller for...)." This is addressed by clarifying that the cleaning controller "is programmed to control" certain apparatus in amended claim 1.

Thus, the present amendments to claims 1 and 8 distinguish claims 1 and 8 from Okuda et al. and Sato et al. by adding the additional distinguishing limitations suggested by comments of the Examiner. Accordingly, allowance of claims 1 and 8 and the dependent claims is requested.

THIS CORRESPONDENCE IS BEING
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Respectfully submitted,



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